

DEPARTMENT OF COMMERCE (DOC)

## **CENSUS SCIENTIFIC ADVISORY COMMITTEE**

### **Using Administrative Records to Assign Owner Demographics to Nonemployer Businesses**

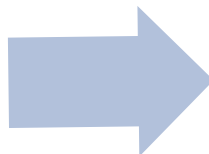
Presented by Adela Luque, Senior Economist, Center for Economic Studies  
December 7, 2018

# Project Description

## Developing New Products Through Blended Data

### Previously: Collected as Part of SBO

- Survey – sample size approx. 800,000 nonemployer firms & 940,000 employer firms
- Every five years
- Three-year lag
- High respondent burden
- Low response rate => high imputation rate & costs



### Currently: Blended Data Approach

- Leverage AR & Census data to assign demographics to business owners
- Full nonemployer universe (approx. 24 million)
- Annual – higher frequency
- Shorter lag than the SBO – more timely
- Reduces imputation & cost
- Eliminates respondent burden
- More detailed geography & industry detail possible
- First (beta) release in 2020 for 2017 nonemployers vintage

Meets stakeholder needs

# Content

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- Tabulations of:
  - Number of nonemployer businesses
  - Number of business owners
  - Total receipts
- By:
  - Demographics of business owner
    - Gender, race, Hispanic origin, veteran status (SBO core demographics)
    - Age, place of birth
    - Other potential (future) characteristics: Salary work, independent contractors, patents, exports, marital status, number of dependents, home ownership, etc.
  - Receipt-size class
  - Geographic area
  - NAICS industry
  - Legal Form of Organization
  - Interactions
- NES-D augments existing NES tabulations by adding demographics component

# Data

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Variable	Data Sources
Nonemployer business identification, revenues, industry, geographic location	Business Register
Business owner identification	Tax Form 1040 & Schedule K1
Race (core demographic in SBO)	Decennial, American Community Survey (ACS)
Hispanic origin (core demographic in SBO)	Decennial, ACS
Gender (core demographic in SBO)	Census Numident (Decennial, ACS)
Veteran-status (core demographic in SBO)	Department of Veterans Affairs (VA) AR data
Age	Census Numident (Decennial, ACS)
Place of birth	Census Numident (Decennial long form, ACS)

# Feedback

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- External Engagement
  - *Presentations to stakeholders:*
    - Small Business Administration - December 11, 2017
    - Federal Reserve Board – December 13, 2017
    - National Women’s Business Council - January 18, 2018
    - Veterans groups - January 18, 2018
    - Minority Business Development Agency – February 16, 2018
    - Census Scientific Advisory Committee – March 30, 2018
  - *Conferences:*
    - First Demographics of the Entrepreneur Workshop – September 20, 2018
    - 2018 ADRF Network Research Conference – November 13, 2018

# Evaluation

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- Assignment of demographic characteristics
- Coverage assessment
- Initial tabulations: National by gender, race, Hispanic origin, veteran status, age, place of birth
- Preliminary coverage results:
  - Anonymized personal identifiers (PIKs) for owners for more than 95 percent of nonemployer businesses (excluding C-corporations)
  - Availability of gender, age & place of birth for approximately 99 percent of identified owners
  - Availability of race & Hispanic origin for approximately 90 percent of identified owners

# Methodological Challenges

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- Veteran's Administration's definition of a veteran does not align with SBO/ABS
- C-Corporations demographics imputation
  - Owners of C-corporation cannot be identified. Therefore, C-corp demographics have to be imputed.
- Identification of owners of partnership & S-corporations using AR data
  - In some cases, not all owners of these types of firms can be identified
- Missing demographic characteristics will be imputed

# Timelines and Milestones

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- Year 1 (2018): Research and development of data and imputation model assessment
  - First beta product before the end of the year. Limited to 1 year of data and national level statistics (report)
  - By: Gender, race, Hispanic origin, veteran status, age & place of birth
- Year 2 (2019): Refinement of models and data
  - Additional years and Q/A of longitudinal properties
  - Exploration of relevant geographic, industry detail and interactions
- Year 3 (2020): Estimates of Nonemployers by Demographic Characteristics
  - Official beta release of NES-D
  - 2020 release of 2017 vintage

NOTE: Traditionally SBO statistics are released with a 3-year lag from reference year => no loss from transition to new program. Goal is to reduce lag in subsequent years.



# Questions

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1. AR data allows for improvements (e.g. number of owners used to assign firm-level demographics) which can create breaks with historical time series: what is the role of stakeholders and census in balancing this tension? How should we balance precision vs consistency?
2. What is best way to build support for NES-D and ensure external awareness?
3. Is there room for public-private partnerships to accelerate product development given potential but limited resources?

Thank you!

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# Background Slides

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**Search** - Use the options on the left (topics, geographies, ...) to narrow your search results

#### Your Selections

##### Search using...

Search:  
2016 ✕

Program:  
Nonemployer Statistics ✕

[clear all selections and  
start a new search](#)

[load search](#) | [save search](#)

##### Search using the options below:

###### Topics

(age, income, year, dataset, ...)

###### Geographies

(states, counties, places, ...)

###### Race and Ethnic Groups

(race, ancestry, tribe)

###### Industry Codes

(NAICS industry, ...)

###### EEO Occupation Codes

(executives, analysts, ...)

Search Results: 1-6 of 6 tables and other products match 'Your Selections'

per page: 25

Refine your search results:

GO

?

☒ topics ☐ race/ancestry ☐ industries ☐ occupations

Selected:

View

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« « 1 » »

Show results from:

	ID	Table, File or Document Title	Dataset	About
<input type="checkbox"/>	NS1600A1	Geographic Area Series: Nonemployer Statistics by Legal Form of Organization for the U.S. and States: 2016	2016 Nonemployer Statistics	
<input type="checkbox"/>	NS1600A2	Geographic Area Series: Nonemployer Statistics for the US, States, Metropolitan Areas, and Counties: 2016	2016 Nonemployer Statistics	
<input type="checkbox"/>	NS1600A3	Geographic Area Series: Nonemployer Statistics by Receipt Size Class for the U.S.: 2016	2016 Nonemployer Statistics	
<input type="checkbox"/>	NS1600A1_FTP	Geographic Area Series: Nonemployer Statistics by Legal Form of Organization for the U.S. and States: 2016	2016 Nonemployer Statistics	
<input type="checkbox"/>	NS1600A2_FTP	Geographic Area Series: Nonemployer Statistics for the US, States, Metropolitan Areas, and Counties: 2016	2016 Nonemployer Statistics	
<input type="checkbox"/>	NS1600A3_FTP	Geographic Area Series: Nonemployer Statistics by Receipt Size Class for the U.S.: 2016	2016 Nonemployer Statistics	

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# 2012 SBO Tables

## Survey of Business Owners (SBO) - Company Summary: 2012 Tables

2012



### 2012 SBO Tables in American FactFinder

[All 2012 SBO tables](#)

Below you will find links to the U.S. Census Bureau's online data access tool, American FactFinder (AFF), that will bring you to a search results page prefiltered for the 2012 SBO. From the search results page you can further filter by geographies and industry codes. Once you open a table, you can filter within the rows for specific groups. The User's Guide for AFF contains a section describing how to filter rows within a table.

#### Gender

[All Gender tables](#)

Detailed Table	Receipts Size	Employment Size
<a href="#">U.S.</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>
<a href="#">States</a>	<a href="#">States</a>	<a href="#">States</a>
<a href="#">Metro Areas</a>		
<a href="#">Counties</a>	Number of NAICS Sectors	Number of States
<a href="#">Places</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>

#### Race

[All Races tables](#)

Detailed Table	Receipts Size	Employment Size
<a href="#">U.S.</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>
<a href="#">States</a>	<a href="#">States</a>	<a href="#">States</a>
<a href="#">Metro Areas</a>		
<a href="#">Counties</a>	Number of NAICS Sectors	Number of States
<a href="#">Places</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>

#### Ethnicity

[All Ethnicity tables](#)

Detailed Table	Receipts Size	Employment Size
<a href="#">U.S.</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>
<a href="#">States</a>	<a href="#">States</a>	<a href="#">States</a>
<a href="#">Metro Areas</a>		
<a href="#">Counties</a>	Number of NAICS Sectors	Number of States
<a href="#">Places</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>

#### Veteran Status

[All Veteran Status tables](#)

Detailed Table	Receipts Size	Employment Size
<a href="#">U.S.</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>
<a href="#">States</a>	<a href="#">States</a>	<a href="#">States</a>
<a href="#">Metro Areas</a>		
<a href="#">Counties</a>	Number of NAICS Sectors	Number of States
<a href="#">Places</a>	<a href="#">U.S.</a>	<a href="#">U.S.</a>

## Survey of Business Owners (SBO) - Characteristics of Businesses: 2012 Tables

2012



### Characteristics of Businesses

(by U.S. level geography, industry, receipts size and employment size)

[All Characteristics of Businesses tables](#)

<a href="#">Jointly Owned or Operated by Spouses</a>	<a href="#">Language(s) Used in Transactions</a>
<a href="#">Majority of Business Family-Owned</a>	<a href="#">Type(s) of Workers Employed</a>
<a href="#">Number of Owners of Business</a>	<a href="#">Employer-Paid Benefits Offered</a>
<a href="#">Year Business Originally Established</a>	<a href="#">Company Had a Web Site</a>
<a href="#">Source(s) of Start-Up or Acquisition Capital</a>	<a href="#">E-Commerce as Percentage of Total Sales</a>
<a href="#">Amount of Start-Up or Acquisition Capital</a>	<a href="#">Seasonal or Part-Time Business Status</a>
<a href="#">Home-Based Business</a>	<a href="#">Business Operating or Reason Ceased</a>
<a href="#">Source(s) of Capital to Expand Business</a>	<a href="#">Operated as Franchise or Partially as Franchise</a>
<a href="#">Type(s) of Customer Categories</a>	<a href="#">Had Operations Outside United States</a>
<a href="#">Percent of Total Sales Exported</a>	<a href="#">Type(s) of Intellectual Property</a>
<a href="#">Outsourced Business Function Outside United States</a>	

## Survey of Business Owners (SBO) - Characteristics of Business Owners: 2012 Tables

2012



### Characteristics of Business Owners

(by U.S. level geography and industry)

[All Characteristics of Business Owners tables](#)

<a href="#">How Initially Acquired Business</a>	<a href="#">Prior Experience Owning a Business</a>
<a href="#">Year Acquired Ownership of Business</a>	<a href="#">Highest Level of Education Completed</a>
<a href="#">Primary Function(s) in Business</a>	<a href="#">Age of the Owner in 2012</a>
<a href="#">Average Hours Per Week Spent Working</a>	<a href="#">Owner Born a Citizen of the United States</a>
<a href="#">This Business Primary Source of Income</a>	<a href="#">Service-Disabled and Other Veteran Characteristics</a>

# Non-employer Statistics: Owner Demographics (NES-D)

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- Evaluation and use of individual-level administrative and Census records to assign demographic characteristics to universe of non-employer firms = > Augmented existing Nonemployer Statistics (NES)
  - Assignment via anonymized individual identifier
  - Cross directorate project including research and production areas
- Production of annual non-employer business statistics by business owner demographics
  - Main demographic characteristics: gender, race, Hispanic origin, veteran status, age, place of birth
  - More geographic & industry detail possible
  - Other potential (future) characteristics: Other salary work, independent contractors, intellectual property, exports, marital status, number of dependents, collateral assets etc.